



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

March 22, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: R. R. Donnelley & Sons / MSM 085-18172-00009

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-MOD.dot 9/16/03



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March 22, 2004

Mr. Grant McGuire
R.R. Donnelley & Sons Company - Warsaw Manufacturing Division.
2801 West Old Road 30, P.O. Box 837
Warsaw, Indiana 46581-0837

Re: 085-18172
Minor Source Modification to
Part 70 Permit No.: T085-6040-00009

Dear Mr. McGuire:

R. R. Donnelley & Sons Company - Warsaw Manufacturing Division was issued a Part 70 permit on August 5, 2002, for the operation of a stationary publication rotogravure printing source. An application to modify the source was received by the Office of Air Quality (OAQ) on November 06, 2003. The modification will result in installation of eight (8) ink jet printers in the RR Donnelley, Warsaw Plant. Pursuant to 326 IAC 2-7-10.5(d)(5) and 326 IAC 2-7-10.5(e), the following emission units are approved for construction at the source:

Eight (8) portable ink jet printers with associated ventilation duct work.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Femi Ogunsola c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 973-575-2555, extension 3241, or in Indiana at 1-800-451-6027.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
FO / EVP

- c: File - Kosciusko County
Kosciusko County Health Department
Northern Regional Office
Air Compliance Section Inspector - Doyle Houser
Compliance Data Section - Karen Ambil
Administrative and Development
Technical Support and Modeling - Michele Boner



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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**R.R. Donnelley & Sons Company
Warsaw Manufacturing Division
2801 West Old Route 30
Warsaw, Indiana 46581-0837**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T085-6040-00009	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: August 05, 2002 Expiration Date: August 05, 2007
First Minor Source Modification.: 085-18172-00009	
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 22, 2004 Expiration Date:March 22, 2009

RR Donnelley Company
Warsaw, Indiana
Permit Reviewer: Holly M. Stockrahm

First Minor Source Modification 085-18172-00009
Modified by: Femi Ogunsola/EVP

Page 2 of 7
OP No. T085-6040-00009



D.5 FACILITY OPERATION CONDITIONS - Eight (8) Portable Ink Jet Printers 46a

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.5.1 Volatile Organic Compounds (VOCs) Limits [326 IAC 2-2] [326 IAC 8-1-6]
[326 IAC 2-4.1-1]
- D.5.2 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)
- D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.5.4 Record Keeping Requirements
- D.5.5 Reporting Requirements

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SECTION D.5

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Eight (8) portable ink jet printers located in the east and west plants, identified as Ink Jet #1 through Ink Jet #8, each with a maximum capacity of 0.93 pounds of black ink and replenisher per hour, with multiple exhaust stacks and associated ventilation ductwork, identified as IJP.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Volatile Organic Compounds (VOCs) Limits [326 IAC 2-2] [326 IAC 8-1-6][326 IAC 2-4.1-1]

The following equipment has VOC and hazardous air pollutants (HAPs) usage limits such that 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and 326 IAC 2-4.1-1 (New Source Toxics Control) , shall not apply:

Eight (8) portable ink jet printers (Ink Jet #1 through Ink Jet #8)

- (1) Volatile Organic Compounds (VOCs) usage shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month; and
- (2) Hazardous air pollutants (HAPs) usage shall be limited to less than ten (10) tons of any single hazardous air pollutant (HAP) or to twenty-five (25) tons of any combination of HAPs. per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

D.5.2 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

Compliance with the VOC and HAP usage limitations contained in Condition D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from manufacturer the copies of the "as supplied" and "as applied" VOC and HAP data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-14.

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of the permit, is required for this facility.

Record Keeping and Reporting Requirement [326 IAC 2-7-5 (3)][326 IAC 2-7-19]

D.5.4 Record Keeping Requirements

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.5.1.
 - (1) The VOC content of each coating material and solvent used.
 - (2) The amount of coating material and solvent used less water on monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

- (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
- (3) The cleanup solvent usage for each month;
- (4) The total VOC and HAP usage for each month; and
- (5) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.5.3, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.5 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the report forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the 'responsible official' as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: R.R. Donnelley & Sons Company - Warsaw Manufacturing Division
Source Address: 2801 West Old Route 30, Warsaw, Indiana 46581
Mailing Address: Old Route 30 West, P.O. Box 837, Warsaw, Indiana 46581-0837
Part 70 Permit No.: T 085-6040-00009
Source Modification No.: 085-18172-00009
Facility: Eight (8) portable ink jet printers, identified as Ink Jet #1 through Ink Jet #8.
Parameter: VOC and HAPs
Limit: (1) Volatile Organic Compounds (VOCs) usage shall be limited to less than twenty-five tons (25) per twelve (12) consecutive month period, with compliance demonstrated at the end of each month; and
(2) Hazardous air pollutants (HAPs) usage shall be limited to less than ten (10) tons of any single hazardous air pollutant (HAP) or to twenty-five (25) tons of any combination of HAPs. per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Emissions	VOC Emissions	VOC Emissions
Month 1			
Month 2			
Month 3			

YEAR: _____

Month	Column 1		Column 2		Column 1 + Column 2	
	HAP Emissions This Month		HAP Emissions Previous 11 Months		HAP Emissions 12 Month Total	
	Single	Combined Total	Single	Combined Total	Single	Combined Total
Month 1						
Month 2						
Month 3						

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Minor Source Modification and Significant Permit Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	R. R. Donnelley & Sons Company - Warsaw Manufacturing Division
Source Location:	2801 West Old Road 30, P.O. Box 837, Warsaw, Indiana 46581-0837
County:	Kosciusko
SIC Code:	2754
Operation Permit No.:	T085-6040-00009
Operation Permit Issuance Date:	August 5, 2002
Minor Source Modification No.:	085-18172-00009
Significant Permit Modification No.:	085-18435-00009
Permit Reviewer:	Femi Ogunsola/ EVP

The Office of Air Quality (OAQ) has reviewed a modification application from R. R. Donnelley & Sons Company - Warsaw Manufacturing Division relating to the operation of stationary publication Rotogravure Printing source.

History

On November 6, 2003, R. R. Donnelley & Sons Company - Warsaw Manufacturing Division submitted an application to the OAQ requesting a source and permit modification to install eight (8) portable Ink Jet printers with associated ventilation duct work. R. R. Donnelley & Sons Company - Warsaw Manufacturing Division was issued Part 70 Operating Permit No. T085-18172-00009 on August 5, 2002.

Explanation of Modification Requested

The source has requested approval to install eight (8) portable ink jet printers with associated ventilation duct work. The ink jet printers use ink and a replenisher (thinner and cleaner) both of which are methyl ethyl ketone (MEK) based. R. R. Donnelley is proposing a federally enforceable limitation for the ink jet printers to restrict the potential to emit emissions to less than twenty-five (25) tons per year of volatile organic compound (VOCs), ten (10) tons per year of any single hazardous air pollutant (HAPs) and twenty-five (25) tons per year of any combination of HAPs. This project is not subject to NSPS requirements. By limiting the VOC and HAPs emissions the potential to emit for this installation is less than the PSD significance level for VOCs and below the 112(g) applicability threshold for HAPs. With the proposed VOC and HAP limitations, this modification falls under the modification threshold of 326 IAC 2-7-10.5 (d) (5) and under the provisions of 326 IAC 2-7-10.5 (e).

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction of the following equipment pursuant to 326 IAC 2-7-10.5(d):

- (a) Eight (8) portable ink jet printers located in the east and west plants, identified as Ink Jet #1 through Ink Jet #8, each with a maximum capacity of 0.93 pounds of blank ink and replenisher per hour, with multiple exhaust stacks and associated ventilation ductwork, identified as IJP.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities in this modification review process.

Existing Approvals

The source was issued a Part 70 Operating Permit T085-6040-00009 on August 5, 2002.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Minor Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 6, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (page 1 of Appendix A).

Potential To Emit Before Controls (Modification)

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

Pollutant	Potential To Emit (tons/year)
PM	less than 250
PM-10	less than 250
SO ₂	less than 250

VOC	greater than 250
CO	less than 250
NO _x	less than 250

HAP's	Potential To Emit (tons/year)
Xylene	greater than 10
Toluene	greater than 10
TOTAL	greater than 25

Justification for Modification

The Part 70 operating permit is being modified through both a Part 70 Minor Source Modification and Significant Permit Modification. These modifications are being performed based on the following justification:

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of volatile organic compounds (VOC) is less than 25 tons per year. The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of hazardous air pollutants (HAP) is less than 25 tons per year for combination of HAP and less than 10 tons per year of single HAP. Therefore, this modification is being reviewed as a minor source modification pursuant to 326 IAC 2-7-10.5(d)(5).
- (b) The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification (No. 085-18435-00009) in accordance with 326 IAC 2-7-12(d). The Significant Permit Modification will give the source approval to operate the proposed emission units.

County Attainment Status

The source is located in Kosciusko County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) is a precursor for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Kosciusko County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions

R.R. Donnelley & Sons Company
Warsaw, Indiana
Permit Reviewer: FO/EVP

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First Significant Permit Modification 085-18435-00009

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability.

Existing Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.38
PM10	2.38
SO ₂	0.16
VOC	315.03
CO	21.85
NO _x	27.29

- (a) This existing source is a major stationary source because VOC is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions are based upon Indiana Air Emissions Summary Data for 2001.

Potential to Emit (PTE) After Controls for the Modification

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit (tons/year)							
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	Single HAP	Total HAPs
Proposed Modification (Eight (8) Portable Ink Jet Printers)	-	-	-	<25.0	-	-	<10.0 (Methyl Ethyl Ketone)	<25.0
Total Emissions	-	-	-	<25.0	-	-	<10.0 (Methyl Ethyl Ketone)	<25.0
PSD Significant Level	25	15	40	40	100	40	N/A	N/A

- (a) This modification to an existing major stationary source is not major because the emission increase due to modification is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability

- (a) This modification is not subject to the requirements of 40 CFR 60, Subpart QQ, Standards of Performance for the Graphics Arts Industry: Publication Rotogravure Printing. This standard applies to each publication rotogravure printing press, that commenced

construction, modification or reconstruction after October 28, 1980.

- (b) This modification is not subject to the requirements of 40 CFR 63.820, Subpart KK - National Emission Standard for the Printing and Publishing Industry. This standard applies to major source of hazardous air pollutants (HAPs), at which publication rotogravure, product and packaging rotogravure or wide-web flexographic printing presses are operated. The eight (8) portable ink jet printers at this source are not subject to the NESHAP, because they are not publication, product and packaging rotogravure printing presses, or wide-web flexographic printing presses, and they are not major for single HAP and combined HAPs.
- (c) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, apply to a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, at a major source that is required to obtain a Part 70 or 71 permit if the PSEU meets the following criteria:
 - (1) the unit is subject to an emission limitation or standard for an applicable regulated air pollutant,
 - (2) the unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard, and
 - (3) the unit has a potential to emit (PTE) before controls equal to or greater than 100 percent of the amount (tons per year) of the pollutant required for a source to classified as a Part 70 major source.

This source was issued initial Part 70 permit No.T085-6040-00009 on August 5, 2002, but the proposed PSEUs each have respective uncontrolled PTEs at less than 100 percent of the applicable major Part 70 thresholds. Additionally, the proposed PSEUs do not use a control device to comply with applicable requirements. As such, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this modification and the proposed PSEUs.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration(PSD))

This modification to an existing major stationary source is not major. The source, which is not one of the 28 listed source categories, has the potential to emit of 250 tons per year of VOC. The source will limit VOC emissions from the proposed ink jet printers to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

R.R. Donnelley & Sons Company
Warsaw, Indiana
Permit Reviewer: FO/EVP

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First Significant Permit Modification 085-18435-00009

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any process or production unit, which in and of itself emits or has the potential to emit (PTE) ten (10) tons per year of any HAP or twenty five (25) tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). This rule does not apply to this modification because the eight (8) portable ink jet printers shall limit the emissions of any single HAP and total combined HAP emissions of less than ten (10) and twenty five (25) tons per year, respectively. Therefore, these units are not subject to the requirements of this rule.

326 IAC 8-1-6 (General Reduction Requirements)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compound (VOC) emissions of twenty five (25) tons per year or more, and which are not otherwise regulated by another provision of Article 8.

The source shall limit total VOC usage for the eight (8) portable ink jet printers to less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to these facilities.

326 IAC 8-5-5 (Graphic arts operations)

This rule applies to packaging rotogravure, publication rotogravure, and flexographic printing sources. This rule does not apply to this modification because the eight (8) portable ink jet printers do not belong to the category of facilities that would have made the rule applicable.

Compliance Requirements

There are no new compliance requirements applicable to the source due to this modification.

Changes to the Part 70 Permit Due to This Modification:

1. Section A.1 has been revised as follows:

A.1 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Four (4) natural gas or No. 2 or No. 6 oil fired boilers described as follows:
 - (a) B1 and B2, installed in July of 1971 and October 1979, respectively, each with a maximum rated capacity of 85 MMBtu/hr,
 - (b) B3, installed in October of 1979, with a maximum rated capacity of 78 MMBtu/hr,
 - (c) B4, installed in June of 1994, with a maximum rated capacity of 98.4 MMBtu/hr.

- (b) Fourteen (14) publication rotogravure printing presses, each using a carbon adsorption solvent recovery system with seventeen (17) adsorbers as control, described as follows:
 - (1) WR-429, installed in September of 1985, a tandem press with a maximum printing width of 70 inches and a maximum line speed of 2460 feet per minute, and enclosed by permanent total enclosure (PTE),
 - (2) WRO-486, installed in December of 1970, with a maximum printing width of 69 inches and a maximum line speed of 1600 feet per minute,
 - (3) WRO-487, installed in December of 1971, with a maximum printing width of 69 inches and a maximum line speed of 2000 feet per minute,
 - (4) WRO-488 and WRO-489, installed in March of 1979 and September of 1978, respectively, with each press having a maximum printing width of 70 inches and a maximum line speed of 2460 feet per minute,
 - (5) WRO-490, installed in July of 1990, a tandem press with a maximum printing width of 70 inches and a maximum line speed of 2756 feet per minute,
 - (6) WRO-491, and WRO-492, and WRO-493 and WRO-494, not yet installed, with each press having a maximum printing width of 125 inches and a maximum line speed of 3000 feet per minute, and enclosed by permanent total enclosure (PTE). WRO-493 and WRO-494 are pre-approved presses at the time of this permit issuance under Construction Permit PSD/CP085-4396-00009,
 - (7) WR-444, installed in December of 1996, with a maximum printing width of 78 3/4 inches and a maximum line speed of 2450 feet per minute, and, although not required by rule, enclosed by permanent total enclosure (PTE),
 - (8) WR-441, WR-442, WR-443, installed in December of 1996, with each press having a maximum printing width of 78 3/4 inches and a maximum line speed of 2450 feet per minute, and enclosed by permanent total enclosure (PTE),
- (c) Three (3) rotogravure proof presses, using the carbon adsorption solvent recovery system described above as control, described as follows:
 - (1) WCM-440, with a maximum printing width of 73 inches and a maximum line speed of 400 feet per minute,
 - (2) WCM-450, installed in September of 1994, with a maximum printing width of 125 inches and a maximum line speed of 900 feet per minute,
 - (3) WCM-460, installed in December of 1993, with a maximum printing width of 78 7/8 inches and a maximum line speed of 600 feet per minute,
- (d) One (1) gravure cylinder wash machine, identified as GCW, installed in April of 1995, located in the east plant.
- (e) One (1) gravure parts press parts washer, identified as GPW, installed in 1991, located in the east plant.
- (f) One (1) gravure cylinder wash machine, identified as WCWM, installed in May of 2000, located in the west plant, using the carbon adsorption solvent recovery system and

enclosed by permanent total enclosure (PTE).

- (g) One (1) gravure press parts washer, identified as WGPW, installed in May of 2000, located in the west plant, enclosed by permanent total enclosure (PTE).
- (h) Two (2) chromium plating lines, CRT-1 and CRT-2, installed in September of 1994, using a composite mesh pad system with a hepafilter as control, each having two (2) rectifiers with a maximum combined capacity of 10,000 amps,
- (i) One (1) pneumatic dust and paper trim collection system located in the east plant and consisting of:
 - (1) One (1) cyclone, identified as EPC-3, installed in May of 1994, exhausting to one (1) baghouse, identified as EPBH-C, installed in June of 1994,
 - (2) One (1) cyclone, identified as EPC-1, installed in 1978,
 - (3) One (1) cyclone, identified as EPC-2, installed in 1978,
 - (4) One (1) cyclone concentrator, identified as EPCON-5, installed in June of 1995, with concentrated paper sent to cyclone, EPC-1, EPC-2, and EPC-3, exhausting to one (1) baghouse, EPBH-E, installed in June of 1995,
 - (5) Three (3) baghouses, identified as EPBH-C, EPBH-D, installed in June of 1994, and EPBH-E, with collected dust sent to one (1) dust auger, silo, and baghouse (EPBH-F) system (identified as an insignificant activity),
 - (6) One (1) cyclone concentrator, identified as EPCON-6, with concentrated dust sent to one (1) cyclone, EPC-4, installed in May of 1994, or to one (1) cyclone concentrator, EPCON-5, with air exhausting to one (1) baghouse, EPBH-E,
 - (7) One (1) cyclone, identified as EPC-4, with concentrated dust sent to one (1) dust auger, silo, and baghouse (EPBH-F) system (identified as an insignificant activity) with air exhausting to one (1) baghouse, EPBH-D,
- (j) One (1) pneumatic paper trim collection system located in the west plant and consisting of:
 - (1) One (1) cyclone, identified as WPC-1, installed in June of 1969,
 - (2) One (1) cyclone, identified as WPC-2, installed in June of 1969,
 - (3) One (1) cyclone concentrator, identified as WPCON-3, installed in August of 1993, modified in June 2002, with concentrated paper sent primarily to a cyclone, WPC-1 or secondarily to WPC-2, exhausting to one (1) baghouse, WPBH, installed in August of 1993,
 - (4) One (1) baghouse, identified as WPBH, with collected dust sent to cyclone, WPC-1 or WPC-2, with air exhausting to the bindery,
 - (5) One (1) cyclone concentrator, identified as WPCON-4, installed in August of 1993, modified June 2002, which has a maximum capacity of 10,500 pounds per hour, with concentrated paper sent primarily to cyclone WPC-1, or secondarily to WPC-2,
 - (6) One (1) cyclone concentrator, identified as WPCON-5, installed in June 2002, which has a maximum capacity of 10,500 pounds per hour, with concentrated paper sent primarily to cyclone WPC-1, or secondarily to WPC-2.
- (k) Six (6) cylinder making finishing sinks located in the east plant, identified as EPFS-1 through EPFS-6, installed in September of 1994,

- (l) One (1) wastewater treatment system located in the east plant and consisting of:
 - (1) One (1) 3000 gallon solvent/water separator, identified as WWT-1, installed in 1996,
 - (2) One (1) 1000 gallon solvent/water separator, identified as WWT-2, installed in 1985,
 - (3) One (1) 17,800 gallon air sparging tank, identified as WWT-3, installed in 1985.
- (m) One (1) cylinder making finishing sink station located in the west plant, identified as WPFS-1, installed in April of 1990,
- (n) Thirty-seven (37) storage tanks, installed in dates ranging from 1960 through 1989, (specific dates are discussed in the Technical Support Document).
- (o) **Eight (8) portable ink jet printers located in the east and west plants, identified as Ink Jet #1 through Ink Jet #8, each with a maximum capacity of 0.93 pounds of black ink and replenisher per hour, with multiple exhaust stacks and associated ventilation ductwork, identified as IJP.**

2. A new section D.5 for the proposed ink jet printers has been added as follows:

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Eight (8) portable ink jet printers located in the east and west plants, identified as Ink Jet #1 through Ink Jet #8, each with a maximum capacity of 0.93 pounds of black ink and replenisher per hour, with multiple exhaust stacks and associated ventilation ductwork, identified as IJP.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Volatile Organic Compounds (VOCs) Limits [326 IAC 2-2] [326 IAC 8-1-6][326 IAC 2-4.1-1]

The following equipment has VOC and hazardous air pollutants (HAPs) usage limits such that 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and 326 IAC 2-4.1-1(New Source Toxics Control) , shall not apply:

Eight (8) portable ink jet printers (Ink Jet #1 through Ink Jet #8)

- (a) **Volatile Organic Compounds (VOCs) usage shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month; and**
- (b) **Hazardous air pollutants (HAPs)usage shall be limited to less than ten (10) tons of any single hazardous air pollutant (HAP) or to twenty-five (25) tons of any combination of HAPs. per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.**

D.5.2 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

Compliance with the VOC and HAP usage limitations contained in Condition D.5.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from manufacturer the copies of the “as supplied” and “as applied” VOC and HAP data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-14.

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of the permit, is required for this facility.

Record Keeping and Reporting Requirement [326 IAC 2-7-5 (3)][326 IAC 2-7-19]

D.5.4 Record Keeping Requirements

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.5.1.
- (1) The VOC content of each coating material and solvent used.
 - (2) The amount of coating material and solvent used less water on monthly basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
 - (3) The cleanup solvent usage for each month;
 - (4) The total VOC and HAP usage for each month; and
 - (5) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.5.3, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.5 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the report forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the ‘responsible official’ as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: R.R. Donnelley & Sons Company - Warsaw Manufacturing Division
Source Address: 2801 West Old Route 30, Warsaw, Indiana 46581
Mailing Address: Old Route 30 West, P.O. Box 837, Warsaw, Indiana 46581-0837
Part 70 Permit No.: T 085-6040-00009
Source Modification No.: 085-18172-00009
Facility: Eight (8) portable ink jet printers, identified as Ink Jet #1 through Ink Jet #8.
Parameter: VOC and HAPs
Limit: (1) Volatile Organic Compounds (VOCs) usage shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month; and
(2) Hazardous air pollutants (HAPs) usage shall be limited to less than ten (10) tons of any single hazardous air pollutant (HAP) or to twenty-five (25) tons of any combination of HAPs. per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Emissions	VOC Emissions	VOC Emissions
Month 1			
Month 2			
Month 3			

YEAR: _____

Month	Column 1		Column 2		Column 1 + Column 2	
	HAP Emissions This Month		HAP Emissions Previous 11 Months		HAP Emissions 12 Month Total	
	Single	Combined Total	Single	Combined Total	Single	Combined Total
Month 1						
Month 2						
Month 3						

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Conclusion

The proposed modification to this stationary publication rotogravure printing source shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 085-18172-00009. The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 085-18435-00009.

Appendix A: Emissions Calculations
VOC and HAP Emission from Ink Jet Printers

Page 1 of 1 TSD App A

Company Name: R. R. Donnelley & Sons Company - Warsaw Manufacturing Division
Address City IN Zip: 2801 West Old Road 30, P.O. Box 837, Warsaw, IN 46581-0837
Modification ID : 085-18172-00009
Title V Permit Number: 085-6040-00009
Reviewer: Femi Ogunsola/EVP
Date: 12/04/2003

THROUGHPUT		
Material	Maximum Usage (Litres per hour)	Maximum Usage (pounds per hour)
Replenisher	0.225	0.392
Ink	0.320	0.557

VOCs				
Material	Maximum Usage (lb/hr)	Weight % Volatiles*	Potential VOC pounds per hour	Emissions (tons/year)
Replenisher	0.392	100%	0.392	1.717
Ink	0.557	93%	0.518	2.271
Total PTE of VOC Emissions for eight (8) ink jet printers =				31.90

HAPs				
Material	Maximum Usage (lb/hr)	Weight % * Methyl Ethyl Ketone	Potential HAP pounds per hour	Emissions (tons/year)
Replenisher	0.392	100%	0.392	1.717
Ink	0.557	93%	0.518	2.271
Total PTE of HAPs Emissions for eight (8) ink jet printers =				31.90

METHODOLOGY

Potential to Emit of VOC (or HAP) = maximum usage (lb/hr) * 8760 hours * (1 ton / 2000 pounds)

Notes:

100 % MEK in Replenisher - worst case as MSDS indicates > 95 %
93 % MEK in Ink - worst case as MSDS indicates < 93%